Asian American–White American Differences in Expressions of Social Anxiety: A Replication and Extension

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This study examined whether Asian American–White American differences on a trait measure of social anxiety extend to nonverbal behavior and to reports of anxiety-related emotions during a 3-min social performance task. Forty Asian Americans and 40 White Americans completed a trait measure of social anxiety and rated their emotions before, and immediately after, a social performance task. Their videotaped behavior was coded using microlevel behavioral codes (e.g., gaze avoidance, fidgeting). Results indicated that Asian Americans reported more anxiety than White Americans on the trait measure and on the emotion rating scales but that they did not differ substantially on microlevel behavioral indexes of social anxiety. Implications of ethnic variations in the patterns of anxious responding are discussed.

Asian Americans • social anxiety • self-report • observed behavior • emotion ratings

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Asians and Asian Americans have been characterized as being passive, deferential, non-assertive, and anxious in interpersonal situations, particularly in contrast to White Americans, who tend to be characterized as assertive. Such characterizations are based on clinical observations (Fukuyama & Coleman, 1992; S. Sue, 1977; Yanagida, 1979) as well as on studies of ethnic differences between Asian Americans and White Americans on self-report measures of assertiveness and social anxiety (e.g., Okazaki, 1997, 2000; D. Sue, Ino, & Sue, 1983; D. Sue, Sue, & Ino, 1990; Zane, Sue, Hu, & Kwon, 1991).

The rather negative characterization of Asian Americans with respect to interpersonal anxiety and related construct may result in limited career opportunities for Asian Americans (e.g., Leong, 1998) or misdiagnoses in mental health settings (e.g., Lo & Lau, 1997).

From the Western perspective, the absence of anxiety in social situations is seen as a desirable characteristic associated with positive mental health and healthy interpersonal functioning (Leary & Kowalski, 1995). However, the Western ideals underlying assertiveness and lack of social anxiety may be inconsistent with the Asian cultural emphasis on self-restraint in interpersonal conduct (Fukuyama & Greenfield, 1983). Many Asian cultures are thought to foster interdependent self-construal that emphasizes the fundamental embeddedness of individuals into a larger social whole (Markus & Kitayama, 1991), and the socialization of an interdependent self may involve the development of a particular sensitivity to others’ negative appraisals of themselves. Thus, from an Asian perspective, a certain level of anxiety about social situations may be normative and even desirable. However, it remains unclear whether the high level of social anxiety and low level of assertiveness reported by Asian Americans are also associated with subjective distress and performance deficits in interpersonal contexts. Past studies have found no Asian American—White American differences in the assertiveness of response behavior (D. Sue et al., 1983, 1990; Zane et al., 1991), but these studies only involved hypothetical scenarios. The present study replicates and extends the earlier studies by D. Sue and his colleagues by contrasting self-reports of social anxiety with observer ratings of videotaped nonverbal behavior in a laboratory test of social anxiety among Asian American and White American college students. White Americans were used as a comparison sample because, as the majority ethnic group, their self-report and behavioral responses are most often used implicitly or explicitly as the normative baselines from which ethnic minority group individuals are judged.

On the basis of previous findings (Okazaki, 1997, 2000; D. Sue et al., 1983, 1990), we expected that Asian Americans would score higher on the self-report trait measure of social phobia than White Americans. We also hypothesized that Asian Americans would report more distress immediately before and after a social performance task, because on average Asian Americans tend to report higher levels of trait social anxiety. We did not make specific predictions about whether ethnic differences would be apparent on nonverbal aspects of social anxiety for two reasons. First, previous studies of Asian American assertions in hypothetical scenarios have not revealed strong Asian—White differences (D. Sue et al., 1983, 1990; Zane et al., 1991). Second, there were theoretical bases for predicting more nonverbal displays of anxiety among Asian Americans (because they typically report more distress on self-report measures) on the one hand and fewer nonverbal displays of anxiety among Asian Americans (because Asian cultural values emphasize modulation of strong emotions) on the other hand. Finally, based on the limited available findings of patterns of Asian American assertion (D. Sue et al., 1983, 1990) as well as the cross-cultural evidence that Asian cultures place less emphasis on self-consistency (Heine & Lehman, 1999), we hypothesized that self-report and
behavioral indexes of social anxiety would show more convergence among White Americans than among Asian Americans.

**Method**

**Participants**

Forty (20 female, 20 male) Asian American and 40 (21 female, 19 male) White American undergraduate students from a large midwestern public university served as participants. Those who identified themselves as Asian American or White American on a mass screening survey in the introductory psychology course were randomly selected and invited to participate in the study.1 Of the 40 Asian American participants, 16 (40.0%) identified themselves as Chinese, 9 (22.5%) as Korean, 4 (10.0%) as Japanese, 2 (5.0%) as Indian, and 4 (10.0%) as “other Asian” (1 as Vietnamese, 1 as Thai, 1 as Hmong, and 1 as Lao). Both parents of all self-identified Asian Americans were also of Asian decent. Approximately two thirds of the Asian American participants were born in Asia (n = 27), and among those who were foreign born the mean age of entry to the United States was 12.2 years (SD = 6.8; range = 1–21). Because some foreign-born Asian Americans had spent parts of their lives in Western countries other than the United States (e.g., Canada, England), whereas some U.S.-born Asian Americans had spent parts of their lives in Asia, the numbers of years spent in Western countries was calculated for each Asian American participant (M = 10.5, SD = 7.29, range = 1–21) as another index of exposure to Western culture. All self-identified White Americans had parents who were both White American and were either U.S. born and resided continuously in the United States or born in a Western country (e.g., Canada) and immigrated at an early age to the United States. The mean age of all participants was 19.7 years (SD = 1.9). White American participants (M = 20.2, SD = 2.3) were slightly older than Asian American participants (M = 19.2, SD = 1.2), t(79) = 2.48, p < .02. However, age was not significantly correlated with any of the main outcome variables.

**Measures**

**CULTURAL AND DEMOGRAPHIC INFORMATION.** The Suinn–Lew Asian Self-Identity and Acculturation scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Virgil, 1987), a 21-item measure of overall degree of acculturation to American culture, was administered to Asian American participants. The mean SL-ASIA score for the Asian American sample in the present study was 2.85 (SD = 0.71), indicating that as a group these Asian Americans were neither very traditionally Asian nor very Americanized. Cronbach’s alpha coefficients for the SL-ASIA with college populations have been reported to range between .88 and .91 (Suinn, Ahuna, & Khoo, 1992). In the present Asian American sample, the alpha coefficient was .91. The SL-ASIA score was highly correlated with the number of years spent in the United States or other Western countries (r = .81, p < .001). Demographic data (ethnicity of the participant and their parents, place of birth, and length and places of residence) were collected from all participants to correctly place the participants in ethnic groups.

**Trait Social Anxiety.** The Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989) is an empirically derived 45-item self-report inventory. The SPAI assesses somatic symptoms and cognition characteristic of social phobia, as well as associated anxiety, avoidance,

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1 Nine additional students participated in the study, but their data were excluded for various reasons. Those who were excluded from the analyses did not differ significantly from those who were retained with respect to their scores on the self-report measures.
and escape behaviors across a range of potentially fear-producing social situations. For a college sample, the 2-week test–retest reliability coefficient was reported to be .86, and Cronbach alpha coefficients for the Social Phobia and Agoraphobia subscales were reported to be .96 and .85, respectively (Turner et al., 1989). The scale also appears to be both sensitive and specific for differentiating social phobics from nonsocial phobics (Beidel, Turner, Stanley, & Dancu, 1989). The alpha coefficient for the Social Phobia and Agoraphobia subscales in the present sample were .99 and .88, respectively.

**EMOTION RATINGS.** Before and after the social performance task, participants completed an expanded version of an emotion self-report inventory used in other emotion research (Gross & Levenson, 1995). In addition to the original 16-item list of emotion terms (amusement, anger, arousal, confusion, contempt, contentment, disgust, embarrassment, fear, happiness, interest, pain, relief, sadness, surprise, and tension; Gross & Levenson, 1995), “anxiety” and “nervousness” were added. The inventory directed the participants to circle the number on the scale that best described the greatest amount of each emotion they were feeling at the moment (or that they had felt at any time during the performance task). On this scale, 0 was anchored as “you did not feel even the slightest bit of the emotion” and 8 was anchored as “the most you have ever felt in your life.”

In a data reduction procedure, the 18 emotion ratings were factor analyzed using principal components followed by an oblique rotation using the promax procedure. Three factors with eigenvalues above 1.0 were retained according to the scree criterion (Cattell, 1966) for both the anticipation period ratings and the performance period ratings. Only the emotion items that were not split between two or more factors and loaded onto one of three factors for both the anticipation and the performance periods were retained for analyses. The first factor, which was labeled as Anxious Emotions, contained the following items: nervousness, anxiety, tension, and embarrassment. The coefficient alpha estimates for these items were .91 and .90 for the anticipation and performance period ratings, respectively. Another factor, labeled Negative Emotions, contained the following items: sadness, pain, disgust, and anger. The coefficient alphas for these items were .84 and .85 for the anticipation and performance period ratings, respectively. The final factor, labeled Positive Emotions, contained the following items: happiness, amusement, and interest. The coefficient alpha estimates for these items were .61 and .66 for the anticipation and performance period ratings, respectively. The ratings for items in each factor were averaged to form composite variables of mean anxious emotions, mean negative emotions, and mean positive emotions for the anticipation and the performance periods.

**BEHAVIORAL CODING.** Nonverbal behavior was coded from a videotaped record of each participant with a coding scheme developed for this study. The videotapes were coded by three (2 White American, 1 Asian American) raters who were blind to the purpose of the study and to participants’ written responses. Four microlevel behaviors for the entire 3-min interaction task were coded. Specifically, gaze avoidance (“amount of time the participant is clearly not making direct eye contact with the confederate”) and prolonged silences (“silences between meaningful statements lasting 5 seconds or greater”) were coded using a stopwatch while continuously viewing the videotape. Coding for fidgeting involved counting the number of times the participant changed seating positions or shifted his or her torso abruptly during the task, and coding for statements of negative affect involved counting the number of separate occasions a participant made statements describing a negative affective state (e.g., discomfort, unease, anxiety, and frustration), separated by changes in topic or by prolonged silences. Two global ratings of
overall anxiety ("general impression of participant’s anxiety for the entire performance task") and appropriateness of behavior ("general impression of the degree to which the participant’s behavior was appropriate given the task of impressing a stranger") were rated on 5-point scales (1 = not at all, 3 = moderate, 5 = extremely). The video records of the anticipation period immediately prior to the performance task was not coded because the microlevel codes such as the prolonged silences and statements of negative affect were not relevant (i.e., participants were instructed not to speak during this period).

Interrater reliability was computed for a subsample of the video records (20% or n = 8) across the three raters. For the items involving coding for duration (gaze avoidance and prolonged silences), the raters agreed within 5 s on 75.0% of the codes. For the other items, the intraclass correlation ranged from .77 (overall anxiety) to .97 (fidgeting).

Procedure
Each participant was tested individually in one 90-min laboratory session in a study about “how individuals’ background, upbringing, and personality may be associated with their responses to situations that may provoke emotional reactions.” The participant gave informed consent and then completed a set of questionnaires. Instructions to the participant from this point on were presented through an intercom or on a 20-in. color monitor placed directly facing the participant. On completion of the written measures, the participant engaged in a film viewing task not relevant to the present study. At the conclusion of the film viewing task, the participant was instructed to relax for a 2-min relaxation period.

Next, the participant engaged in a social performance procedure used in previous studies of the behavioral assessment of social anxiety (e.g., Borkovec, Stone, O’Brien, & Kaloupek, 1974; Monti et al., 1984). Prior to the introduction of the procedure, the experimenter entered the room to set up a video camera and adjusted the camera to directly focus on the face and upper body of the participant. The procedure, which involved the participant interacting with a research confederate of the opposite sex (Monti et al., 1984), was introduced through the intercom. The participants were told to make “the very best impression” possible but also that the confederate will not talk back to them. One minute after the instruction was given, the participant was instructed to report their current emotions on the emotion rating form. Thirty seconds after the participant signaled the completion of the form, the confederate entered the experimental room and sat in a chair directly across a table from the participant. The participant was instructed to continue to remain silent until further instructed. One minute later, the participant was instructed to begin speaking. The confederates were trained to maintain a neutral facial expression throughout the performance task. At the end of the 3-min period, the experimenter instructed the participant to stop speaking, and the confederate left the room, marking the end of the procedure. Immediately following this task, the participant rated the extent to which he or she experienced various emotions during the performance task using the emotions rating form, and the participant also indicated whether he or she had met or seen the confederate prior to the experiment.

Results
Self-Reports of Social Anxiety

SPAI. A t test revealed that Asian Americans (M = 70.33, SD = 24.57) scored significantly higher than White Americans (M = 51.90, 2Because of the unavailability of equal numbers of Asian American and White American confederates of each sex, ethnic match between the participant and confederate was not systematically varied.
SD = 23.23) on the SPAI difference score, $t(78) = 3.45, p = .001$. The effect size (calculated as the difference in the ethnic group means divided by the pooled standard deviation) for this ethnic difference was .77. With respect to the screening guidelines suggested by Turner et al. (1989) to interpret the score, the Asian American mean falls in the “possible social phobia” range (difference score of 60–79), whereas the White American mean falls in the “possible mild social phobia” range (difference score of 34–59). Thus, according to both the effect size index and the suggested guidelines for interpreting these scores, the ethnic difference on this social anxiety measure in this particular sample of college students appears to be substantial.

EMOTION RATINGS. Given that the ratings were made on a scale anchored from 0 (not even the slightest bit) to 8 (the most I have ever felt in my life), the mean anxious emotions scores in the range of 2.93 to 4.58, which were greater than the mean positive emotions or mean negative emotions, suggest that the experimental manipulation successfully elicited moderate levels of the target emotions related to social anxiety.

A profile analysis was performed on the three emotion summary indexes for the anticipation period, with ethnicity as the grouping variable. Using Wilks’s criterion, the profiles of the emotion ratings during this period did not deviate significantly from parallelism, $F(2, 77) = 0.13, ns$. The differences between Asian Americans and White Americans on their ratings averaged over all three emotion indexes approached significance, $F(1, 78) = 3.46, p = .07, \eta^2 = .04$, such that Asian Americans tended to report higher levels of all emotions than White Americans during the speaking task. When averaged over the ethnic groups, the emotions were found by Wilks’s criterion to deviate significantly from flatness, $F(2, 77) = 148.44, p < .001, \eta^2 = .79$. Post hoc analysis using paired $t$ tests for emotion ratings during the performance period also showed that the participants reported much more anxious emotions than either the negative emotions, $t(79) = 17.12, p < .001$, or positive emotions, $t(79) = 7.49, p < .001$.

Post hoc analysis using paired $t$ tests showed that the contrast between anxious emotions and negative emotions, and the contrast between anxious emotions and positive emotions, were both statistically significant, $t(79) = 14.87, p < .001$ and $t(79) = 4.58, p < .001$, respectively. In other words, combining the ratings for both groups, the mean rating for anxious emotions was significantly higher than the mean ratings for either negative or positive emotions during the anticipation period.

A profile analysis was also performed on the three emotion summary indexes for the performance task period, with ethnicity as the grouping variable. The results were similar to the results from the anticipation period. Using Wilks’s criterion, the profiles of the emotion ratings during this period also did not deviate significantly from parallelism, $F(2, 77) = 0.02, ns$. The differences between Asian Americans and White Americans on their ratings averaged over all three emotion indexes approached significance, $F(1, 78) = 3.46, p = .07, \eta^2 = .04$, such that Asian Americans tended to report higher levels of all emotions than White Americans during the speaking task. When averaged over the ethnic groups, the emotions were found by Wilks’s criterion to deviate significantly from flatness, $F(2, 77) = 148.44, p < .001, \eta^2 = .79$. Post hoc analysis using paired $t$ tests for emotion ratings during the performance period also showed that the participants reported much more anxious emotions than either the negative emotions, $t(79) = 17.12, p < .001$, or positive emotions, $t(79) = 7.49, p < .001$.

Gender was not a central variable under the present investigation, but preliminary analyses with gender were conducted given that gender is often a potent variable in most anxiety research. A $2 \times 2$ analyses of variance with gender and ethnicity as independent variables on the main outcome variables (SPAI, anxious emotions, and summary behavioral index) revealed no significant main effect of gender or Gender $\times$ Ethnicity interaction.
Behavioral Indexes

The means and standard deviations for each ethnic group on the four microlevel behavioral codes and two global rating based on the entire 3-min performance task period are shown in Table 1. A series of \( t \) tests on the six rating codes was performed to examine whether Asian Americans and White Americans differed on these nonverbal indexes of social anxiety during the social interaction. To correct for simultaneous tests of statistical significance, we adjusted the alpha level to a lower level (\( p = .05/6 \) or .008). Using this strict standard, none of the microlevel codes or global behavioral ratings showed significant differences between Asian American and White American participants.

Correspondence Among the Response Systems

A zero-order correlational analysis was conducted to examine whether Asian Americans and White Americans differed in the patterns of relationships among the self-report and behavioral channels of expression of social anxiety during the social performance task. To reduce the number of behavioral code variables, we converted the four microlevel codes and the two global ratings for the entire 3 min of performance task into \( z \) scores (with appropriateness of behavior reverse coded), then summed the scores to form a summary behavioral index of anxiety, in which higher number indicated higher ratings of observed anxiety.

As shown in Table 2, the observer ratings of anxious behavior were not significantly associated with trait social anxiety for either ethnic group. However, the trait anxiety and self-reported anxious emotions were positively correlated for White Americans, as were the self-reported anxious emotions and the observer ratings. For Asian Americans, none of the associations reached statistical significance. Ethnic differences between each set of correlation coefficients were tested using the procedures outlined by Bruning and Kintz (1997). The correlation between self-reported anxious emotions and the summary behavioral index showed statistically significant differences, where the two indexes correlated at a significantly higher level for White Americans (\( r = .42 \)) than for Asian Americans (\( r = -.10 \)), \( z = 2.33, p < .05 \). Ethnic differences between the two other pairs of correlations did not reach statistical significance.

Within-Group Analyses of Asian American Sample

The Asian American group consisted of participants of various Asian ethnic groups (Chinese, Korean, Japanese, Indian, Vietnamese, Thai, Hmong, and Lao). The numbers of participants in each Asian ethnic

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<th>TABLE 1 Means and Standard Deviations of Behavior Codes During the Social Performance Task by Ethnicity</th>
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<td>Variable</td>
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<tr>
<td>Microlevel codes</td>
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<tr>
<td>Statements of negative affect (frequency)</td>
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<td>Fidgeting (frequency)</td>
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<td>Total gaze avoidance (seconds)</td>
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<td>Total prolonged silences (seconds)</td>
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<td>Global ratingsb</td>
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<td>Appropriateness of behavior</td>
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\(^a\)Significance levels are for individual \( t \) tests. \(^b\)Ratings were made on 5-point scales (1 = not at all, 5 = extremely).
group were too small to conduct comparative analyses of Asian ethnic groups. However, we had collected some demographic information regarding their place of birth, age at immigration, and an acculturation and ethnic identity measure (SL-ASIA). This information was used to conduct the following post hoc analyses within the Asian American sample with respect to social anxiety measures.

Asian American participants were first classified into one of three acculturation categories: U.S. born \( (n = 13) \), those who immigrated at or before age 12 \( (n = 10) \), and those who immigrated after age 12 \( (n = 17) \). The classification of immigrants according to age at immigration (on/before or after age 12) has been shown in other studies of Asian American college students to form meaningful groupings according to cultural identity (Tsai, Ying, & Lee, 2000). As shown in Table 3, Asian Americans who were U.S. born tended to have lower indexes of social anxiety than immigrants, with those who immigrated after age 12 showing the highest indexes. Although the individual \( F \) tests comparing the three acculturation groups approached significance on the SPAI and the behavioral indexes, adjusting the alpha level downward \( (p = .05/3 \text{ or } .017) \) to control for simultaneous tests of statistical significance renders the acculturation group comparisons statistically not significant.

Correlational analyses were also conducted for the Asian American sample \( (n = 39) \) to examine whether the degree of acculturation to the American culture, as measured by the SL-ASIA, was associated with various indexes of social anxiety.\(^4\) Although the SL-ASIA was negatively correlated with SPAI \( (r = -.35, p = .03) \), self-reported anxious emotions during social performance \( (r = -.28, p = .08) \), and sum of standardized behavioral codes \( (r = -.17, \text{ ns}) \), none of the correlations were significant after adjusting the alpha level \( (p = .05/3 \text{ or } .017) \) to correct for simultaneous tests of statistical significance. In summary, it appears that there may be some within-group differences among Asian Americans in their levels of social anxiety in relation to their levels of acculturation. It is possible that with a larger sample and a study designed specifically to test for these within-group differences, clearer relationships between cultural variables and social anxiety within the Asian American population may be discerned.

Confederate Ethnicity

Research participants were always matched with a confederate of opposite sex for the social performance task, but ethnicity of the confederate in relation to the ethnicity of the participant was not systematically varied. Although about one half \( (53\%) \) of the participants were ethnically matched with a

\(^4\) One Asian American male participant failed to complete the SL-ASIA because of administrative error.
confederate (i.e., White–White or Asian–Asian) and about one-half (48%) were ethnically mismatched with a confederate (i.e., White–Asian or Asian–White), the proportion of ethnic match or mismatch differed for participant ethnic groups. Significantly more Asian American participants (73%) faced an ethnically dissimilar (White American) confederate than White American participants (23%) who faced an ethnically dissimilar (Asian American) confederate, \( \chi^2(1, N = 40) = 20.05, p < .001 \).

To examine whether the ethnic match or mismatch with the confederate contributed to the ethnic differences on self-reported emotions or behavior during the performance task, we conducted a series of 2 \( \times \) 2 analysis of variance with participant ethnicity (Asian vs. White) and ethnic match (match vs. mismatch). In none of the three summary emotion ratings during the performance task period or on the six behavioral codes was there a significant main effect for the ethnic match or a significant interaction effect between participant ethnicity and ethnic match. That is, for participants regardless of their ethnicity, having a confederate of the same or different ethnicity did not appear to have had a systematic effect on their emotions or behavior during the social performance task. Although this is a weak test of the effects of confederate ethnicity, they are consistent with previous findings by D. Sue et al. (1983, 1990) in which the experimenter ethnicity was also not found to be a significant factor in the participant verbal assertive behavior.

### Discussion

This study set out to examine whether the difference between Asian Americans and White Americans on a self-report measure of trait social anxiety would extend to differences in state measures of anxiety (in observable behavioral signs and in self-reported emotions). Two aspects of these data are noteworthy. First, in contrast to the robust ethnic difference on self-report measures, comparisons on behavioral indexes of social anxiety during the performance task yielded relatively few ethnic differences. Second, we found slight variations in the pattern of multiple measures of social anxiety between the two ethnic groups. Of note, the relation between self-report and behavioral indexes during the performance task differed by ethnicity.

The direction and the magnitude of ethnic difference on the SPAI in the present sample were consistent with past findings on social anxiety measures (e.g., Okazaki, 1997; D. Sue et al., 1983, 1990). On trait and state self-report measures, Asian Americans on average reported more social anxiety than did White Americans. In contrast, there were no significant ethnic differences on the four microlevel and two global behavioral rating codes used in the present study. A straight-
forward interpretation of the present findings is that Asian Americans did not behave in an observably different manner than White Americans during an anxiety-provoking social task even though Asian Americans felt more anxious. It is possible that Asian Americans may feel more anxious than they actually appear to observers, perhaps because of their cultural training not to show strong emotions especially to strangers.

Nevertheless, this finding also brings into question whether the microlevel behavioral variables selected for coding in the present study were differentially sensitive to social anxiety across ethnic groups. We had chosen microlevel analysis (measures based on frequency counts and duration recordings) of videotaped behavior because such codes are presumably less vulnerable to the raters’ implicit or explicit stereotypes of individuals based on his or her apparent ethnicity and because these indexes have been associated with social anxiety in the Western conceptualization. Asian Americans who exhibit these behaviors in Western contexts (e.g., in academic or social settings with non-Asian Americans) are likely to be judged as anxious. Thus, the Western conception of social anxiety is relevant to this population. However, the lack of association between subjective anxiety and behavioral indexes among the Asian American participants suggests that these individuals may have exhibited these behaviors for other cultural reasons. For example, given the instruction to “make the very best impression,” Asian American participants may have avoided making direct eye contact with the confederate so as not to show disrespect. Similarly, making negative statements about one’s performance may have been intended by the Asian American participants to show modesty. Future studies are needed to explore the cultural perceptions surrounding normative and anxious behavior in social situations from the perspective of Asian Americans. Because the criterion and the ecological validity of micro measures have been repeatedly questioned (e.g., Monti et al., 1984), the microlevel approach appears to have largely been abandoned as a behavioral assessment strategies in more recent studies of social anxiety and social phobia. The present findings add to the caution with which behavioral indexes of social anxiety must be assessed and interpreted across ethnicity.

The profile analyses of emotion ratings before and during the social performance task revealed that Asian Americans reported higher levels of not only anxious emotions but also positive and negative emotions. At a first glance, these results may appear somewhat counterintuitive. Cross-cultural studies in the past have shown that East Asians tend to report lower subjective well-being (i.e., less global happiness, less life satisfaction, less frequent positive affect, and more frequent negative affect) than North Americans and that these national differences are not merely artifacts of income, general negative response set, or other reporting biases (Diener, Suh, Smith, & Shao, 1995). Other studies have also noted that East Asians are more reluctant than North Americans to endorse depression scale items that tap subjective experiences of positive affect (Noh, Kasper, & Chen, 1998; Ying, 1987).

However, it should be noted that the findings documenting the less positive affect among Asians and Asian Americans tend to be based on global judgments of positive affect with a longer time span and outside of specific social context. The studies comparing Chinese Americans and White Americans...
cans in an interpersonal situation within a laboratory setting (Tsai & Levenson, 1997; Tsai, Levenson, & McCoy, 2000) found no significant ethnic differences on the reports of negative or positive emotions. That Asian Americans tended to report more intense emotions of every type in this study may have been due to some form of acquiescence response styles. Cheung and Rensvold (2000) suggested that multiple-group confirmatory factor analysis can effectively test for the presence of acquiescence response styles, but the small sample size in the present study precludes such an analysis. Past studies of ethnic comparisons on written social desirability measures also have not demonstrated much ethnic or cultural differences (Heine & Lehman, 1995; Okazaki, 2000). However, the situational demands of a laboratory-based social performance task may elicit differential responding across ethnicity, and this possibility warrants further examination.

The present study was the first to examine nonverbal behavioral indexes together with self-report measures to explore ethnic variations in the expression of social anxiety. Our findings underscore the importance of examining cultural variations in distress using multiple modes of assessment. Nevertheless, the results must be interpreted with the following caveats. First, only one social performance task (always with the opposite-sex confederate) was administered to each participant in this study, thus the generalizability of the findings to other behavioral tests and naturalistic settings may be limited. Moreover, the behavioral task used in the present study was a laboratory-based standardized protocol, with fewer contextual cues of the type present in the daily social interactions in which college students typically engage. Rather, our laboratory task resembled a public speech task. Whereas public speaking is a common source of social anxiety (Pollard & Henderson, 1988), not all college students routinely perform public speaking. The lack of ecological validity of the laboratory task may have been particularly salient for Asian Americans for whom daily interactions may contain cues about their cultural or ethnic minority status or their interaction partners that result in social anxiety. Recent behavioral assessments of social phobia have attempted to simulate naturalistic situations that provoke social anxiety in socially phobic individuals, such as videotaped role plays of dinner party conversations (Fydrich, Chambless, Perry, Buergener, & Beazley 1998) or an impromptu speech task (Beidel, Turner, & Jacob, 1989). The present findings must be replicated in future studies using more naturalistic tasks in nonlaboratory settings or with other behavioral assessments. However, it should be noted that the present finding of lack of Asian–White differences on behavioral indexes during a social performance task replicates and extends the past findings of verbal assertion with Chinese Americans using simulated role plays (D. Sue et al., 1983, 1990). Thus, there is some support for the convergent validity of the present results.

Second, the video camera was not concealed during the social performance task in this study, and it is possible that participants may have modulated their facial expressivity because of their keen awareness of being observed and recorded on videotape. Although one can argue that social anxiety always involves an implicit or explicit audience (Leary & Kowalski, 1995), the un concealed camera may have had an inhibitory effect, reducing variability in the observable behavior. Further, we do not know whether the un concealed camera may have uniformly affected all participants or differentially affected one cultural group more than another. For example, it is possible that Asian American participants inhibited their anxiety more than White American participants because of their concern with losing face or their wish to perform well on a task in a university-based experiment. Ekman and Friesen’s results (Ekman, 1972; Friesen, 1972) with Japanese college students suggest that this is a possibility. Future studies using concealed cameras may clarify some of these questions. Third, because all participants in this study were university students, the gen-
eralizability of the findings beyond this population is not known. Finally, because of the small sample size and our inability to assign confederates of specific ethnicity, we were not able to fully explore the within-group differences among Asian Americans or the effects of confederate ethnicity. The post hoc analyses suggested that whereas the confederate ethnicity in this experiment may not have had a measurable effect (consistent with D. Sue et al., 1983, 1990), less acculturated Asian Americans tended to report more global social anxiety and appeared more anxious to observers. Mechanisms underlying cross-ethnic and within-ethnic differences in social anxiety should be explored in further studies.

Despite the limitations, our study indicated that elevated reports of social anxiety on standardized screening measures do not translate into similar patterns of observable behavior or subjective distress for Asian Americans and White Americans. This in turn has significant implications for assessment and treatment of Asian Americans. Clinicians using Western-constructed instruments such as the SPAI must be cautious in their interpretation of the scores with Asian Americans. On the one hand, a high SPAI score may not necessarily indicate an impairment. On the other hand, Asian Americans who do not exhibit behavioral signs of social anxiety may nevertheless experience high levels of subjective distress and anxiety. Clinicians may use the subjective distress-performance discrepancy among Asian Americans as a tool in cognitive–behavioral treatment. For example, clinicians may reduce Asian American clients’ social anxiety by gathering evidence that their subjective distress does not appear to be affecting their actual performance in ways that are detectable by others. Tanaka-Matsumi, Seiden, and Lam (1996) offered a conceptual framework for conducting culturally informed cognitive behavioral assessment and therapy using behavioral principles of functional analysis, with an emphasis on incorporating the clients’ interpretation and meaning of their symptoms into the assessment process. Our findings may be used to support the utility of such culturally informed practice approaches.

The present study points to several future directions that would inform our understanding of cultural–psychological mechanisms that shape the multiple domains of an anxiety response. For example, future studies may explore whether the present findings may be replicated with behavioral assessments in more naturalistic contexts with Asian Americans who report high social anxiety. The possibility of differential cultural meanings associated with the behavioral indexes of social anxiety (e.g., the reason behind gaze avoidance) must also be explored, perhaps through ethnographic methods, to ascertain the cultural validity of such nonverbal behavior. Finally, the effects of being a member of a visible racial minority group for Asian Americans were not directly examined in this study but are worthy of future investigations. In the meantime, our findings underscore the importance of developing culturally informed approaches to assessment and treatment of social anxiety with Asian Americans and other cultural groups.

References


